

Chapter 8: Mode of execution of the action plan

8.1 Key points of the action plan

It can be found in the table below a summary of the basic elements, objectives, and actors responsible for the actions, and content of the actions exposed in chapter 7. And with regard to the PDM of the action plan is presented in the Appendix AP2.

Table 8.1 (1) Key Points of the action plan

Recapitulated points	Details	Explanations	
Horizon of the plan	Year 2015	Duration of the project:6 years	
Zone object of the plan	5 regions	36 water reservoirs,159 villages	
Objective of the plan	Direct objective	To implement and to deploy actions of agricultural development carried out by populations, centred on the valorisation of water reservoirs by the through farmer to farmer transmission, with the support of government services	
Actors responsible for the actions of the plan	Level of official services	Office of the project organized around the Regional Directorate of the Agricultural Development	
	Reservoirs level	Users of the reservoirs, around the persons in charge of the cooperatives of users of the reservoirs	
Orientations for the establishment of the plans	Self development	To make the peasants to become aware that they are the main actors for the development of their living area The peasant are continually involved in the agricultural development Installation of cooperatives.	
	Management of the sites by the peasants	Sustainable water, arable land and forest resources management Maintenance of reservoirs	
	Installation of peasant demonstration field	The application of agricultural technique Installation of site for demonstration Training of key peasants	
	Redefinition of the role of extension agent and collaboration with the local government	Technical assistance To which the dynamisation of organizations is added Sustainable execution of activities after the implementation of the AP Collaboration with the local government	
Context of components	A. Reinforcement of capacities of reservoirs users in self development	A.1.Reinforcement of capacities of basic extension agents	A1.1 To put at the disposal of the basic extension agents
			A1.2 Reinforcement of capacities of basic extension agents in organization of reservoir users
			A1.3 Installation of a system of distribution and capitalization of information
		A2.Reinforcement of farmer's capacities in planning, execution, monitoring and evaluation of actions for the valorisation of the reservoir	A2.1 Installation of reservoirs users cooperatives
			A2.2 Training on the establishment, execution, monitoring and evaluation of reservoirs valorisation plans (RVP)
			A2.3 Training on the maintenance of reservoirs
	B. Improvement of incomes and living conditions of reservoirs users	B1. Intensification and diversification of dry season cultivation	A2.4 Installation of BLPC for natural resources management
			A2.5 Training on struggling against sand accumulation
		B2 Installation of inputs shops B3 Support to the management of sales of agricultural products B4 Introduction of rice cultivation B5. Introduction of Fish farming B6. Introduction of fruit growing B7. Introduction of improved seed varieties for rainfed cultivation B8. Support to the processing and conservation of the agricultural products B9.Support of Micro finance of tontine type B10. Training on animal health and feeding B11. Training on the improvement of knowledge in health and hygiene (diseases related to water) B12. Introduction of improved cooking stoves	B1.1 Training on dry season cultivation techniques
			B1.2 Reinforcement of irrigation system

8.2 Period of execution of the actions

The actions will be carried out for three years on each site (see figure 8.2(1)). The first year will be centered on the reinforcement of working facilities of the basic extension agents and on the reinforcement of their capacities, then on the implementation of actions for the reinforcement of capacities of reservoirs users as regards self development. From the second year of implementation, some actions for the improvement of incomes and living conditions of farmers will be carried out.

	1st year	2nd year	3rd year
Reinforcement of reservoir users capacities as regards self development (Reinforcement of the basic extension agent's capacities)			
Reinforcement of reservoirs user's capacities as regards self development (Reinforcement of farmer's capacities as regards planning, execution; monitoring and evaluation of actions of reservoirs valorization)			
Improvement of reservoir user's incomes and living conditions			

Figure 8.2 (1) Calendar per site (Investing time)

The period of execution of the action plan is 6 years, from 2010 to 2015 (see figure 8.2(2)). The regions will be gradually concerned according the order below: The first step will concern Maradi and Tahoua regions because these regions host many functional reservoirs. Moreover some villages of Dosso and Tillabéri regions are assisted by the African Development Bank's project. That is why; these regions will be concerned at the second step. Concerning the choice of referent sites, they will be selected after discussions with the DRDA since each region has its own socioeconomic situation. The criteria for the choice of these referent sites (arable surface area, existence of farmer's organization, existence of extension agents for instance) will be defined during these discussions.

2010	2011	2012	2013	2014	2015
Tahoua, Maradi					
	Dosso				
			Tillabéri, Niamey		

Figure 8.2 (2) Study calendar and the action plan (Investing time)

8.3 Volume of the actions

The total volume of the actions of the action plan is the grand total of total volumes of the actions for each reservoir.

On the sites of the reservoirs, to implement the actions of rural development carried out by the populations and centered on the valorisation of the reservoirs, the reinforcement of reservoir user's capacities and the improvement of incomes and living conditions of reservoirs users will be carried out, by targeting the various actors who are the official services, the users of the reservoirs, and the populations.

Table 8.3(1) presents the criteria for adoption of the actions, and table 8.3(2) gives the volume of the actions estimated on the basis of these criteria:

Table 8.3 (1) Criteria for adoption of the actions

Components	Sub-components	Activities	Criteria for adoption
A. Reinforcement of capacities of reservoirs users on self development	A1.Reinforcement of capacities of basic extension agents	A1.1 of basic extension agents	Existence of extension agents for the supervision of usable reservoirs
		A1.2 Reinforcement of capacities of basic extension agents in organizing reservoir users	
		A1.3 Installation of a system of distribution of information	
	A2.Reinforcement of capacities of farmer's in planning, execution, monitoring and evaluation of actions for the valorisation of the reservoir	A2.1 Installation of cooperatives of reservoirs users	Existence of usable reservoirs acceptance by the users
		A2.2 Training on the establishment, execution, monitoring and evaluation of reservoirs valorisation plans (RVP)	Existence of usable reservoirs installation of cooperative
		A2.3 Training on the maintenance of reservoirs	
		A2.4 Installation of BLPC for management of natural resources	
		A2.5 Training on struggling against sand accumulation	Existence of usable reservoirs, installation of cooperatives, request by the cooperative
B. Improvement of incomes and living conditions of reservoirs users	B1. Intensification and diversification of garden crops	B1.1 Training on gardening techniques	Existence of usable reservoirs (categories 1 and 2), installation of cooperatives, request by the cooperative
		B1.2 Reinforcement of irrigation system	
	B2 Installation of inputs shops		Existence of usable reservoirs, installation of cooperatives, request by the cooperative
	B3 Support to the management of sales of agricultural products		Existence of usable reservoirs (categories 1 and 2), installation of cooperatives, request by the cooperative
	B4 Introduction of rice cultivation		Existence of usable reservoirs (category 2 possessing land usable for rice cultivation), installation of cooperative, request by the cooperative
	B5. Introduction of Fish farming		Existence of usable reservoirs (category 1 retaining water year round), installation of cooperative, request by the cooperative
	B6. Introduction of fruit growing		Existence of usable reservoirs (categories 1 and 2), installation of cooperatives, request by the cooperative
	B7. Introduction of verities seed varieties for rainfed cultivation		Existence of usable reservoirs, installation of cooperatives, request by the cooperative
	B8. Support to processing and conservation of agricultural products		Existence of usable reservoirs (categories 1 and 2), installation of cooperatives, request by the cooperative
	B9.Support of Micro finance of tontine type		Existence of usable reservoirs, installation of cooperatives, request by the cooperative
	B10. Training on animal health and feeding		Existence of reservoirs used for breeding, installation of cooperatives, request by the cooperative
	B11. Training on the improvement of knowledge in health and hygiene (diseases related to water)		Existence of usable reservoirs, installation of cooperatives, request by the cooperative
	B12. Introduction of improved cooking stoves		Existence of usable reservoirs, installation of cooperatives, request by the cooperative

Table 8.3 (2) Volume of actions for all the water reservoirs

		A. Reinforcement of capacities of reservoirs users on self development										B. Improvement of incomes of reservoirs users											
		A.1.Reinforcement of capacities of basic extension agents			A2.Reinforcement of farmer' s capacities in planning, execution, follow-up and evaluation of actions for the valorization of the reservoir					B1. Intensification and diversification of garden crops		B2 Installation of inputs shops	B3 Support to the management of sales of agricultural products	B4 Introduction of rice cultivation	B5. Introduction of Fish farming	B6. Introduction of fruit growing	B7. Introduction of improved seed varieties for rainfed cultivation	B8. Support to processing and conservation of agricultural products	B9.Support of Micro Finance of tontine type	B10. Training on animal health and feeding	B11. Training on the improvement of knowledge in health and hygiene (diseases related to water)	B12. Introduction of improved cooking stoves	
		A1.1 Equipping of basic extension agents	A.1.2 Reinforcement of capacities of basic extension agents in organizing reservoir users	A1.3 Installation of a system of distribution of information	A2.1 Installation of cooperatives of the reservoirs users	A2.2 Training on the establishment, execution, follow-up and evaluation of reservoirs valorisation plans (RVP)	A2.3 Training on the maintenance of reservoirs	A2.4 Installation of BLP for the management of natural resources	A2.5 Training on struggling against sand accumulation	B1.1 Training on gardening techniques	B1.2 Reinforcement of irrigation system												
Category 1	1 Kongou Gorou (Ni. MB)	Isite	Isite	Execution of region level	Isite	Isite	Isite	3village	Isite	Isite	Isite	Isite	Isite		Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	
	2 Sorey (Ni. MB)	Isite	Isite		Isite	Isite	Isite	Isite	5village	Isite	Isite	Isite	Isite	Isite			Isite	Isite	Isite	Isite	Isite	Isite	
	3 Tondibia Gorou (Ni. MB)	Isite	Isite		Isite	Isite	Isite	Isite	4village	Isite	Isite	Isite	Isite	Isite			Isite	Isite	Isite	Isite	Isite	Isite	
	4 Bonkor (Ti. MB)	Isite	Isite		Isite	Isite	Isite	Isite	2village	Isite	Isite	Isite	Isite	Isite		Isite	Isite	Isite	Isite	Isite	Isite	Isite	
	5 Fanakoira (Ti. MB)	Isite	Isite		Isite	Isite	Isite	Isite	3village	Isite	Isite	Isite	Isite	Isite		Isite	Isite	Isite	Isite	Isite	Isite	Isite	
	6 Gaigorou (Ti. MB)	Isite	Isite		Isite	Isite	Isite	Isite	1village	Isite	Isite	Isite	Isite	Isite		Isite	Isite	Isite	Isite	Isite	Isite	Isite	
	7 Kandoum (Ti. MB)	Isite	Isite		Isite	Isite	Isite	Isite	3village	Isite	Isite	Isite	Isite	Isite		Isite	Isite	Isite	Isite	Isite	Isite	Isite	
	8 Mari (Ti. MB)	Isite	Isite		Isite	Isite	Isite	Isite	6village	Isite	Isite	Isite	Isite	Isite		Isite	Isite	Isite	Isite	Isite	Isite	Isite	
	9 Sanam (Ti. MB)	Isite	Isite		Isite	Isite	Isite	Isite	1village	Isite	Isite	Isite	Isite	Isite			Isite	Isite	Isite	Isite	Isite	Isite	
	10 Gombewa (Do. MB)	Isite	Isite		Isite	Isite	Isite	Isite	8village	Isite	Isite	Isite	Isite	Isite			Isite	Isite	Isite	Isite	Isite	Isite	
	11 Koré Bechemi (Do. MB)	Isite	Isite		Isite	Isite	Isite	Isite	5village	Isite	Isite	Isite	Isite	Isite			Isite	Isite	Isite	Isite	Isite	Isite	
	12 Rouda Goumandey (Do. MB)	Isite	Isite		Isite	Isite	Isite	Isite	2village	Isite	Isite	Isite	Isite	Isite			Isite	Isite	Isite	Isite	Isite	Isite	
	13 Guidan Bado (Ta. MB)	(Isite)	(Isite)		(Isite)	(Isite)	(Isite)	(Isite)	(2village)	(Isite)	(Isite)	(Isite)	(Isite)	(Isite)		(Isite)	(Isite)	(Isite)	(Isite)	(Isite)	(Isite)	(Isite)	
	14 Tarwada (Ta. MB)	Isite	Isite		Isite	Isite	Isite	Isite	5village	Isite	Isite	Isite	Isite	Isite			Isite	Isite	Isite	Isite	Isite	Isite	
	15 Dan Lssa (Danja) (Ma. MB)	Isite	Isite		Isite	Isite	Isite	Isite	5village	Isite	Isite	Isite	Isite	Isite		Isite	Isite	Isite	Isite	Isite	Isite	Isite	
	16 Rafin Wada (Ma. MB)	Isite	Isite		Isite	Isite	Isite	Isite	8village	Isite	Isite	Isite	Isite	Isite		Isite	Isite	Isite	Isite	Isite	Isite	Isite	
	17 Tchidafawa (Ma. MB)	Isite	Isite		Isite	Isite	Isite	Isite	8village	Isite	Isite	Isite	Isite	Isite			Isite	Isite	Isite	Isite	Isite	Isite	
Category 2	1 Molia (Ti. WEIRS)	Isite	Isite	Isite	Isite	Isite	Isite	4village	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite		
	2 Bougiri (Do. WEIRS)	Isite	Isite	Isite	Isite	Isite	Isite	3village	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite		
	3 Kogar beye (Do. WEIRS)	Isite	Isite	Isite	Isite	Isite	Isite	4village	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite		
	4 Tanda (Do. WEIRS)	Isite	Isite	Isite	Isite	Isite	Isite	1village	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite		
	5 Akoukou (Ta. WEIRS)	Isite	Isite	Isite	Isite	Isite	Isite	7village	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite		
	6 Bourdi 1 (Ta. WEIRS)	(Isite)	(Isite)	(Isite)	(Isite)	(Isite)	(Isite)	(3village)	(Isite)	(Isite)	(Isite)	(Isite)	(Isite)	(Isite)	(Isite)	(Isite)	(Isite)	(Isite)	(Isite)	(Isite)	(Isite)		
	7 Bourdi 2 (Ta. WEIRS)	Isite	Isite	Isite	Isite	Isite	Isite	3village	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite		
	8 Chanyassou (Ta. WEIRS)	Isite	Isite	Isite	Isite	Isite	Isite	5village	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite		
	9 Edir (Ta. WEIRS)	Isite	Isite	Isite	Isite	Isite	Isite	10village	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite		
	10 Edouk (Ta. WEIRS)	(Isite)	(Isite)	(Isite)	(Isite)	(Isite)	(Isite)	(14village)	(Isite)	(Isite)	(Isite)	(Isite)	(Isite)	(Isite)	(Isite)	(Isite)	(Isite)	(Isite)	(Isite)	(Isite)	(Isite)		
	11 Gadiyaw (Ta. WEIRS)	Isite	Isite	Isite	Isite	Isite	Isite	9village	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite		
	12 Grougoutourou (Ta. WEIRS)	Isite	Isite	Isite	Isite	Isite	Isite	2village	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite		
	13 Zongon Roukouzzoum (Ta. WEIRS)	Isite	Isite	Isite	Isite	Isite	Isite	3village	Isite	Isite	Isite	Isite	Isite	Isite		Isite	Isite	Isite	Isite	Isite	Isite		
	14 Bakassombouba (Ma. WEIRS)	Isite	Isite	Isite	Isite	Isite	Isite	5village	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite		
	15 Béri-Béri (Ma. WEIRS)	Isite	Isite	Isite	Isite	Isite	Isite	7village	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite		
	16 Iyataousa (Ma. WEIRS)	Isite	Isite	Isite	Isite	Isite	Isite	11village	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite		
	17 Kananbakache (Ma. WEIRS)	Isite	Isite	Isite	Isite	Isite	Isite	1village	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite		
	18 Koumchi (Ma. WEIRS)	Isite	Isite	Isite	Isite	Isite	Isite	7village	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite		
	19 Magaagi Rogo (Ma. WEIRS)	Isite	Isite	Isite	Isite	Isite	Isite	3village	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite		
	20 Mili (Ma. WEIRS)	Isite	Isite	Isite	Isite	Isite	Isite	1village	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite		
	21 Roura (Ma. WEIRS)	Isite	Isite	Isite	Isite	Isite	Isite	3village	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite		
Category 3 (Objective of construction other than agricultural)	1 Jaja (Ta. WEIRS)	(Isite)	(Isite)	(Isite)	(Isite)	(Isite)	(Isite)	(1village)	(Isite)			(Isite)				(Isite)		(Isite)	(Isite)	(Isite)	(Isite)		
	2 Bokologi (Ma. MB)	Isite	Isite	Isite	Isite	Isite	Isite	1village	Isite			Isite				Isite		Isite	Isite	Isite	Isite		
AP		36site	36site		36site	36site	36site	159village	36site	35site	35site	36site	35site	19site	8site	35site	36site	35site	36site	36site	36site		
PP		4site	4site		4site	4site	4site	20village	4site	3site	3site	4site	3site	2site	1site	3site	4site	3site	4site	4site	4site		

NB: The parts over lined in gray of the table indicate the sites that one executed in pilot project.

8.4 Project of system of execution of the action plan

(1) System of execution

As the Action Plan's (AP) executive body, the project office for the development of Sahelian oases (hereinafter as the "Project Office") will be set up in Maradi in 2010. The following experts will be recruited to the project office:

- ① Rural Development (and Project Office director)
- ② Organization
- ③ Irrigation
- ④ Agronomy

The office's main functions are as follows;

- ① Explaining to relevant organizations and persons the AP's guiding principles and implementation program, and building a basis for consultation and communication with the concerned parties.
- ② Implementing the study, selection and set-up of activities, as well as the technical support, follow-up and evaluation of each of the AP's activities while taking into consideration the natural conditions of each site and the priorities of cooperatives.
- ③ Organizing the management of each of the aforementioned actions (specifications, drawing up and signing of contracts, equipment and raw-material procurement, report evaluation, etc.) and budgetary management.

The AP's implementation will receive technical support from the relevant ministries in each region and department acting as intermediary level of each region's rural development directorate.

Furthermore, a steering committee at the central government level and a regional-level committee will be set up when the AP is implemented. The objectives of these two committees, their participants, and the frequency of meetings will be as follows:

(a) The steering committee:

Goals: Explaining the AP's progress to the relevant parties in Niger's central government; debating the relevance of the AP's orientation in accordance with the government's policies.

Participants: Chaired by the Secretary-general of the Ministry for the Agricultural Development, the committee comprises each of the relevant ministries and representatives of other organizations.

Frequency: Once a year.

(b) The Consultative Committee:

Goals: Exchanging information between relevant active projects in the impacted zones and updating synergies between projects.

Participants: Representatives of relevant administrative and technical bodies, financial and technical partners, NGO's present in the areas concerned

Frequency: Once a year

Figure 8.4(1) presents the project of system of execution of the action plan.

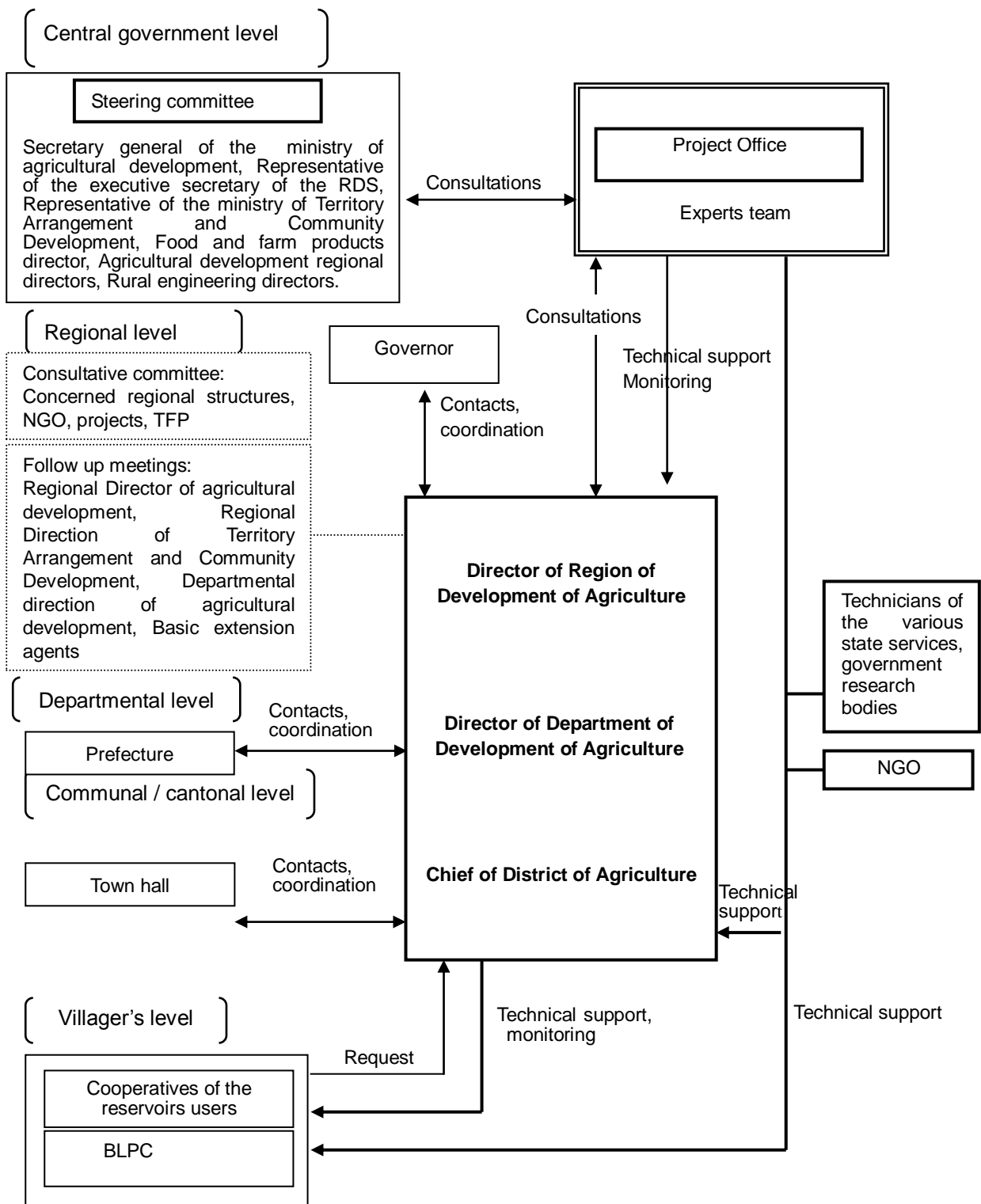


Figure 8.4 (1) Project of system of execution of the action plan

(2) Implementation Order

The AP will start in 2010 with work in the regions of Tahoua and Maradi, and will expand to work in the Dosso region in late 2011. In 2013 the office will move to Niamey and the AP will be implemented in the Niamey, Tillabery and Dosso regions. The AP's duration will be 3 years in each region. An agreement on the AP's implementation and its support by the relevant structures will be obtained at the beginning of the first year. The relevant structures are the following:

- ① Project Office Director
- ② Agricultural Development Regional Director, Agricultural Development Departmental Director
- ③ Territory Arrangement and Community Development Regional Director
- ④ Governor (Regional), Prefect (Departmental), Mayor (township)

Based on the agreement on the AP's implementation between the concerned parties, the following activities will be put into place to reinforce the capabilities necessary for the durable usage of the works.

- ① Appointment by the Agricultural Development Regional Director of a CDA in charge of each work site
- ② Supply of equipment (motorbike, fuel) for the CDA to monitor the work sites
- ③ Implementation of the improvement of facilitating ability training for the CDA
- ④ Consciousness raising for beneficiaries of reservoirs by the regional service for cooperative action and promotion of rural organizations, and by the CDA
- ⑤ Support for the establishment of a cooperative (election of an executive body, defining of rules)
- ⑥ Administrative training for the executive office members
- ⑦ Training for executive members of cooperative to elaborate, execute and monitor the plan for valorization the reservoir
- ⑧ Training the responsible members of cooperative in maintenance
- ⑨ Training the responsible members of cooperative in struggling sand accumulation
- ⑩ Support for the creation of a basic land property commission for natural-resources management

The second and third year after the AP's start in each region will emphasize revenue-generating and life-enhancing activities for users. In order to define the activities, the work-enhancing priorities chosen by the cooperatives the first year and the natural conditions of the works in question will be taken into consideration. Each activity selected will reflect the cooperative's conditions (population's contribution, payment capacity, training participants' tasks, etc). Cooperative requests will be made after consulting with the relevant persons. Figure 8.4 (2) shows the evolution of each activity for increase the income and improve the living condition of farmers from the time of its selection to its implementation and management.

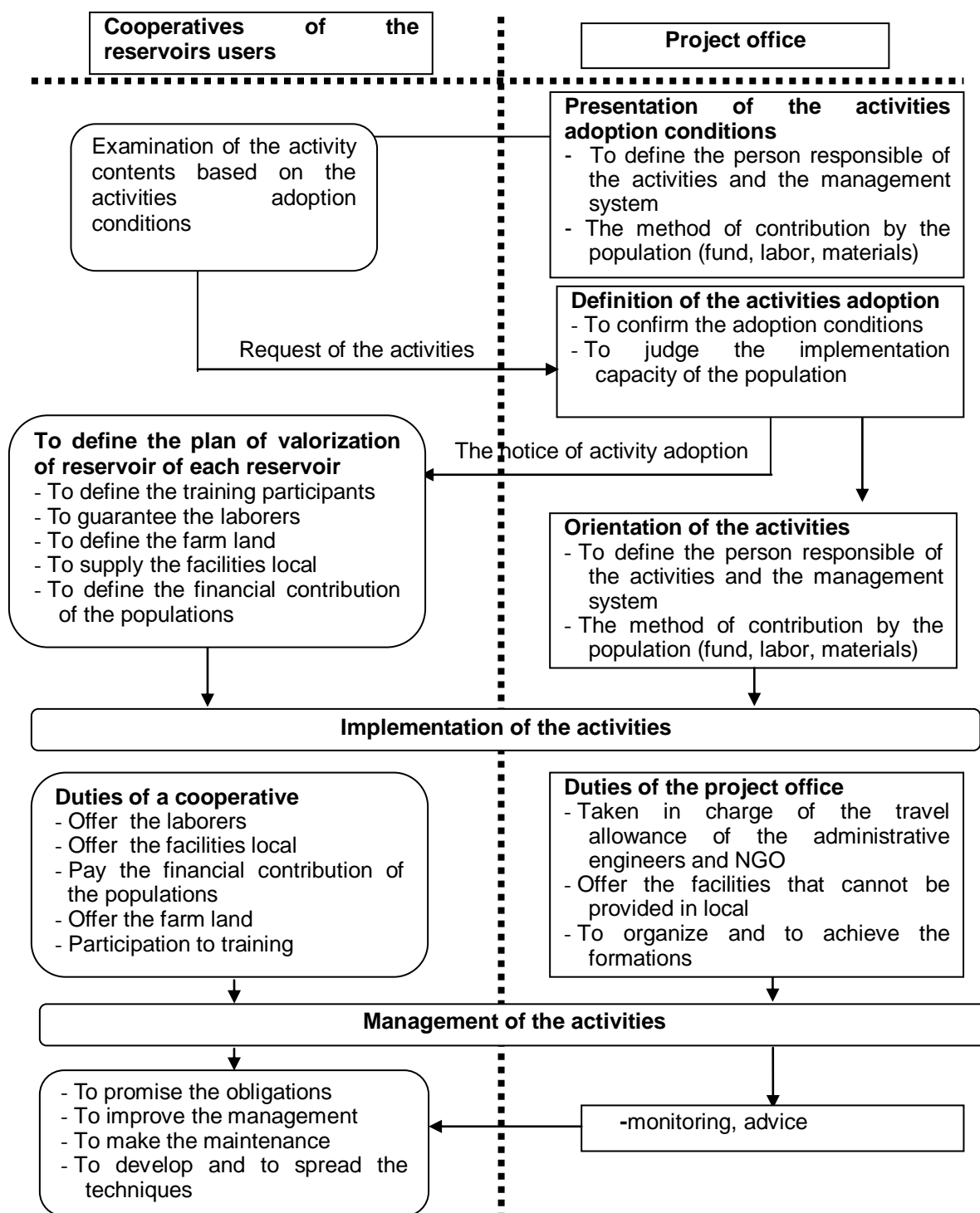
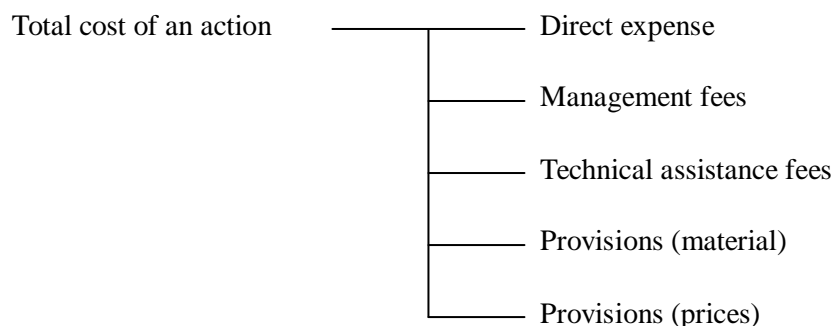


Figure 8.4 (2) Evolution of each activity for increase the income and improve the living condition of farmers.

8.5 Cost of the actions

8.5.1 Structuring of the total cost of the actions

The total cost of the actions breaks up as follows:



(1) Direct expenses

Within the framework of the direct expenses, the expenses of a service entrusted to a service provider include the various fees requested by the service provider.

(2) Management fees

10% of the direct expenses of the action are added as ordinary fees for the execution of the action by the main executants.

(3) Technical assistance fees

They are the expenses caused by the various studies, and they come to be added for an amount 10% of the direct expenses of the actions.

(4) Provisions (material)

10% of the direct expenses are added as a provision to answer an increase in the expenditure due to risks such as a change of design, degradation of the climatic conditions, etc.

(5) Provisions (price)

A provision of an amount of 10% of the direct expenses is reserved to answer the fluctuations in prices during the period of execution of the actions.

(6) Reference year

It is the year 2009 which is used as reference for the quantification of the costs.

(7) Exchange rate

The exchange rate is fixed at 449.903 francs CFA for 1 US dollar, on September 2009 (application of the rate of calculation of the JICA)

8.5.2 Total cost of the actions

Table 8.5(1) below has the results of the quantification carried out on the basis of principle described in point 8.5.1. The details of calculations are found in the appendix AP3.

Table 8.5 (1) Detail of the total cost of the actions

Table 610 (1) Detail of the total cost of the actions			Cost (F CFA)
A. Reinforcement of capacities of reservoirs users on development	A.1.Reinforcement of capacities of basic extension agents	A1.1 Equipping of basic extension agents	150,012,000
		A.1.2 Reinforcement of capacities of basic extension agents in organizing of reservoir users	29,610,000
		A1.3 Installation of a system of distribution of information	212,433,000
	A2.Reinforcement of farmer's capacities in planning, execution, monitoring and evaluation of actions for the valorisation of the reservoir	A2.1 Installation of cooperatives of the reservoirs users	45,738,000
		A2.2 Training on the establishment, execution, follow-up and evaluation of reservoirs valorisation plans (RVP)	18,684,000
		A2.3 Training on the maintenance of reservoirs	50,508,000
		A2.4 Installation of BLPC for the management of natural resources	106,020,000
		A2.5 Training on struggling against sand accumulation	80,334,000
B. Improvement of incomes and living conditions of reservoirs users	B1. Intensification and diversification of garden crops	B1.1 Training on gardening techniques	35,105,000
		B1.2 Reinforcement of irrigation system	251,632,000
	B2 Installation of inputs shops		214,920,000
	B3 Support to the management of sales of agricultural products		14,787,000
	B4 Introduction of rice cultivation		325,565,000
	B5. Introduction of Fish farming		91,800,000
	B6. Introduction of fruit growing		226,808,000
	B7. Introduction of improved seed varieties for rainfed cultivation		22,689,000
	B8. Support to processing and conservation of agricultural products		59,937,000
	B9.Support of Micro finance of tontine type		39,060,000
	B10. Training on animal health and feeding		15,930,000
	B11. Training on the improvement of knowledge in health and hygiene (diseases related to water)		16,830,000
	B12. Introduction of improved cooking stoves		24,588,000
Total fees of the offices of the project (vehicles, personnel, rents)			459,011,000
Environmental assessment			105,876,000
Participation in the agro-sylvo-pastoral fairs (foires agro-sylvo-pastorales)			5,637,000
Participation to meetings of the regional consultative committee (reunions des cadres de concertation)			6,202,000
Missions of supervision of the Directorate of the Studies and Planning off the Ministry for the Agricultural Development			14,062,000
Steering committee			4,422,000
Establishment and translation of guides and supports			18,434,000
Total of the direct cost of the actions			2,646,634,000
Management fees			264,663,000
Expenses for the technical support			264,663,000
Provision (material)			264,663,000
Provision (price)			264,663,000
Grand total			3,705,286,000
Total cost in US dollars (1 US dollar = 449.903 francs CFA) (Sep. 2009)			8,235,000

Chapter 9: Conformity of the actions of the AP with the RDS

9.1 Conformity of the actions of the AP with the RDS

Currently the Special Program of the President of the Republic is at its third phase (2006-2009) during which it is envisaged the restoration of the built reservoirs and the completion of the reservoirs whose constructions are started. The construction of new reservoirs thus is not programmed. The orientation being to check the implementation of reservoirs already built. This third phase will end by December 2009. The construction of new reservoirs could be continued only through the programs of the RDS namely programs 4-1 (hydro-agricultural facilities) and 11 (Fight against the food crisis by the improvement of irrigation) on financing of government or its technical and financial partners. The detailed implementation plan for the construction of the new reservoirs is not yet established.

As for the action plan which covers 36 sites distributed on 5 regions (Dosso, Maradi, Niamey Tahoua and Tillabery), it is perfectly integrated in the RDS particularly the program 11 (Fight against the food crisis by the improvement of the irrigation). It is also noted that the action plan in addition to the programs referred to above, it also concerns specifically the programs 2 (Local governance of natural resources), 3 (professional Organizations and paths structuring) and 6 (Research-training-extension). This therefore can apply to all the sites of water reservoir (Weirs, dams, lakes and ponds etc...) for their perfect implementation and be integrated in the regional plans of implementation of the RDS.

9.2 Connection between the AP and the SDR

The various actions gone under the experimental checks within the framework of our study cover the whole of the structuring and priority sectoral programs of the Rural Development Strategy. Table 9.2 (1) below presents the relationship between the actions considered in the action plan, and strategies of the RDS:

Table 9.2(1) Connection between the AP and the SDR

Study on Sahel Oasis Development in the Republic of Niger (SSOD)			Rural Development Strategy (RDS)			
Sub-projects	Components	Contents of the actions	Programs	Sub- Programs	Objectives	Specific objectives
A. Reinforcement of capacities of reservoirs users on self development	A1. Reinforcement of capacities of basic extension agents	A1.1.Equipping of basic extension agents	P7: reinforcement of rural sector public institutions	Sp7-2: information systems and knowledge of the rural world	To contribute to the establishment and the piloting of the rural development policy by the production up to date, reliable and transparent information, based on a good knowledge of the sector	SO1: production and diffusion of agricultural information
		A1.2 Reinforcement of capacities of basic extension agents in organizing reservoir users				SO2: production and diffusion of information on breeding
		A1.3 Installation of a system of distribution of information				SO3: production and diffusion of information on water resources and environment
	A2. Reinforcement of farmer's capacities in planning, execution, monitoring and evaluation of actions for the valorisation of the reservoir	A2.1 Installation of cooperatives of the reservoirs users	P3: professional organizations and paths structuring	Sp3-2: reinforcement and structuring of the professional organizations (producers)	To promote the organization and the professionalism of the producers	SO1: professionalism of the organizations of producers
		A2.2 Training on the establishment, execution, follow-up and evaluation of reservoirs valorisation plans (RVP)				
		A2.3 Training on the maintenance of reservoirs	P4: rural infrastructures	SP 4-1: hydro agricultural infrastructures	To improve the contribution of irrigated agriculture to the agricultural GDP from 14% now to 28% in 2015	SO1: improvement of the productivity of installations and diversification of the irrigation productions for the profitability of investments
		A2.4 Installation of BLPC for management of natural resources	P2: Local governance of natural resources		To valorise and in a sustainable manner to manage the natural resources	SO3: consolidation and increase in irrigation surface areas
		A2.5 Training on struggling against sand accumulation	P10: preservation of the environment		To preserve the environment for a healthy and sustainable exploitation	SO4: promotion of a rational management of natural resources for irrigation
			P13: lands restoration and tree plantation		To reverse the tendency to the generalised degradation of land and vegetation	SO1: securing of land property
B. Improvement of incomes and living conditions of reservoirs users	B1. Intensification and diversification of dry season cultivation	B1.1 Training on gardening techniques	P6: research, training, vulgarisation		To contribute to the improvement of the performances of the rural sector by the development and the adoption of technologies adapted to the user's needs and by the training of the actors of rural development	SO3: knowledge, management and securing of pastoral resources
						SO4: knowledge, management and securing of forest, faunal and halieutic resources
						SO1: restoration of degraded lands
						SO2: preservation of forest resources and reverse in the decrease of afforested area
						SO1: organising the populations in the intervention zone and to reinforce their capacity
						SO2: continuation and intensification of actions for the restoration of degraded lands and to struggle against desertification
						SO1: development of an agronomic and environmental research adapted to the needs of rural actors
						SO2: development of the support advise to the rural actors

Study on Sahel Oasis Development in the Republic of Niger (SSOD)			Rural Development Strategy (RDS)			
Sub-projects	Components	Contents of the actions	Programs	Sub- Programs	Objectives	Specific objectives
		B1.2 Reinforcement of irrigation system	P4:rural infrastructures	Sp4-1:hydro agricultural infrastructures	To improve the contribution of irrigation agriculture to the agricultural GDP while carrying it from 14% to 28% in 2015	SO1:improvement of the productivity of installations and diversification of the irrigated production for the profitability of investments SO3:consolidation and increase in irrigated surfaces areas SO4:promotion of a rational management of the natural resources for irrigation
	B2 Installation of inputs shops		P3:professional organizations and paths structuring	Sp3-3: marketing of the agro-sylvo-pastoral products	To improve competitiveness of the agro-sylvo-pastoral products and to reinforce the commercial capacities of the actors	SO1:guarantee of the conditions of good marketing of agro-sylvo-pastoral products SO2:creation of added value on the agro-sylvo-pastoral products
	B3 Support to the management of sales of agricultural products		P3:professional organizations and paths structuring	Sp3-3: marketing of the agro-sylvo-pastoral products	To improve competitiveness of the agro-sylvo-pastoral products and to reinforce the commercial capacities of the actors	SO1:guarantee of the conditions of good marketing of agro-sylvo-pastoral products SO2:creation of added value on the agro-sylvo-pastoral products
	B4 Introduction of rice cultivation		P4:rural infrastructures	Sp4-1:hydro agricultural infrastructures	To improve the contribution of irrigation agriculture to the agricultural GDP while carrying it from 14% to 28% in 2015	SO1:improvement of the productivity of installations and diversification of the irrigated production for the profitability of investments SO3:consolidation and increase in irrigated surfaces areas SO4:promotion of a rational management of the natural resources for irrigation
			P6:Research training, extension		To contribute to the improvement of the performances of the rural sector by the development and the adoption of technologies adapted to the user's needs and by training the actors for rural development	SO1:development of an agronomic and environmental research adapted to the needs of rural actors SO2:development of the support -advise to rural actors
			P11:fight against the food crisis by the development of irrigation		To ensure the food safety by the development of irrigation	SO1:to increase the availability and the food accessibility to populations SO2:to increase the agricultural quantum of exports to high commercial value SO3:to contribute to the emergence of a new race of farmers
	B5. Introduction of Fish farming		P2: local governance of the natural resources		To valorise and in a sustainable manner to manage the natural resources	SO 4: knowledge, management and securing of forest, faunal and halieutic resources
			P9:reduction of the vulnerability of the households	SP 9-2: health - nutrition	To guarantee for the rural populations a satisfactory food on nutritional plan and the possibility of being and remaining in good health	SO1:diversification and improvement of population food

Study on Sahel Oasis Development in the Republic of Niger (SSOD)			Rural Development Strategy (RDS)			
Sub-projects	Components	Contents of the actions	Programs	Sub- Programs	Objectives	Specific objectives
				SP 9-3: increase in the incomes of most vulnerable	To guarantee for the vulnerable populations the minima incomes to allow them to improve their monetary access to food	SO1: securisation of incomes of populations from the vulnerable zones SO2: valorisation of the migration strategy SO3 Improvement of income generating activities
	B6. Introduction of fruit growing		P4: Rural infrastructures	SP 4-1: Hydro Agricultural Infrastructures	To improve the contribution of irrigation agriculture to the agricultural GDP while carrying it from 14% to 28% in 2015	SO1: improvement of the productivity of installations and diversification of the irrigated production for the profitability of investments
			P11: fight against the food crisis by the development of irrigation		To ensure the food safety by the development of irrigation	SO1 : To increase the food access and availability to populations SO2: To increase the market value of agricultural products SO3 To contribute to the emergence of new farmers race
	B7. Introduction of improved seed varieties for rainfed cultivation		P6 : research, training and vulgarization		To contribute to the improvement of rural sector performances for the development and the adoption of technologies adapted to the needs of users and by the training of actors of rural development	SO1 : development of an agronomic and environmental research adapted to needs of rural actors SO2 : development of the support advise for the rural actors
	B8. Support to the processing and conservation of agricultural products		P9: reduction of the vulnerability of the households	SP 9-3: increase in the incomes of most vulnerable	To guarantee for the vulnerable populations the minima incomes to allow them to improve their monetary access to food	SO1: securing of the incomes of populations in vulnerable zones SO2: valorization of the strategy of migration SO3: development of the income generating activities
	B9.Support of Micro finance of tontine type		P5 : Rural financial system		To rise the financial coverage of financial services to 15% in rural area through the development of micro finance and rural bank	SO1 : improvement of the access to credit SO2 : development of the micro finance
	B10. Training on animal health and feeding		P12 : pastoral adjustment and securing of pastoral systems		To arrange the pastoral space and to secure the pastoral systems	SO2 : improvement and valorization of pastoral system productions
	B11 Training on the improvement of knowledge in health and hygiene (diseases related to water)		P9 : reduction of households weakness	SP 9-2: health-nutrition	To guaranty to populations a sufficient food for nutrition and abilities to remain healthy	SO2 : consumers protection against diseases related to unhealthy, contaminated and deteriorated food SO3 : improvement of nutritional and health quality of food
	B12 Introduction of improved cooking stoves		P10: preservation of the environment		To preserve the environment for a healthy and sustainable exploitation	SO2 : preservation of forest resources and reverse in the decrease of afforested area
			P13 : lands restoration and tree plantation		To reverse the tendency to the generalised degradation of land and vegetation	SO3 : reinforcement of actions for afforestation and implementation of actions working for the inversion of the decrease in afforested areas

Chapter 10: Requests and proposals to the government of Niger

As shown in figure 10.1(1) "Distribution of the sites per category of reservoir and per region", the reservoirs of category 3, for which the use for agriculture is already problematic or will become problematic in few years to come, are distributed on four regions (Dosso, Maradi, Tahoua and Tillabéri) and they reach 42 % of the whole reservoirs.

Among the remaining 58%, consisted of reservoirs of category 1 and 2 in good conditions, in of number of cases it is noted that, due to an insufficiency of organization, land property problems, social problems, or of problems of maintenance, the reservoirs are not developed by the users.

The action plan presents measurements in terms of valorisation and maintenance of the reservoirs through the organization of the users of the reservoirs. This chapter presents a request addressed to the Niger part related to points which are to be realized by the government of Niger, before starting of the action plan. It exposes then proposals which relate to the points to respect during the construction of later reservoirs.

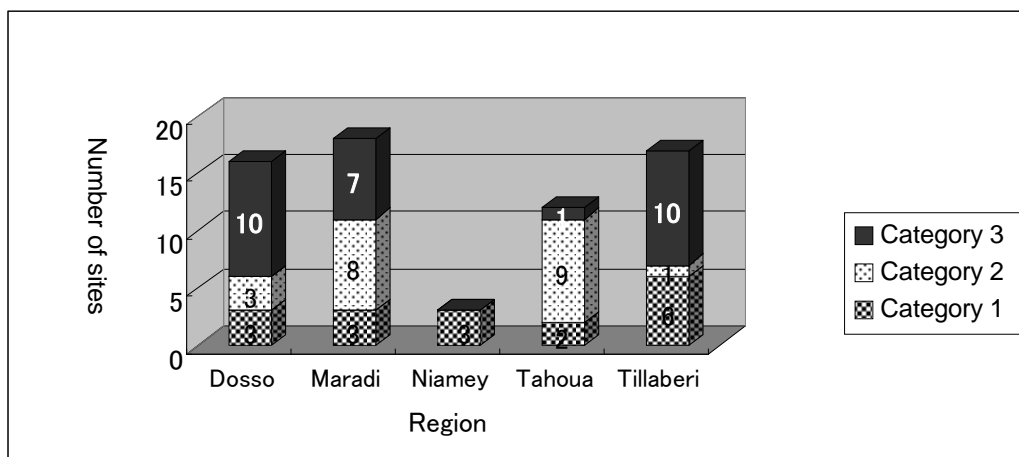


Figure 10.1 (1) Distribution of sites per category of reservoir and per region

10.1 Requests during the execution of the action plan

During the execution of the action plan, it will be necessary to quickly solve the problems of assignment of the extension agents and the problems of building work of the reservoirs still currently suspended, reason for which the following requests are carried out:

10.1.1 Request for the assignment of the extension agents

The number of the basic extension agents (BEA) in charge of the popularization and the supervision of the local populations tended to decrease these last years, but there was a new recruitment in 2006. However, the situation is not yet such as each commune profits from a BEA. Thus it is expected that there will be probably among the communes housing the sites of reservoirs targeted by the action plan, some in which there will be no BEA. It would be necessary consequently that the basic extension agents are affected by the government of Niger in all the communes housing the sites objects of the action plan, at the time of its implementation.

10.1.2 Request for the building the reservoirs which construction interrupted

It is noted that the building work of two reservoirs remained unfinished until July 2009, namely those of Guidan Bado, and Zongon Roukouzoum. That does not make it possible to ensure the valorisation of the reservoirs. It would be necessary that the building work of these reservoirs is completed before the starting of the action plan.

10.1.3 Budget request for the implementation of the Action Plan

The request for the valorisation of all reservoirs sites constructed within the frame work of the Special Program of the President of the Republic in all regions of Niger was presented to Japan government in august 2008. This request was officially approved in February 2009 by Japan government. However it is not certain to involve every site in all regions. Therefore, it is requested that negotiation should be started at an early stage with Japanese government and the preparation for the acquisition of the action plan's budget should be begun.

In Tillaberi region concerned by the request, the valorisation of 4 was undertaken for their valorisations by the Project of Valorisation of Water in Dosso and Tillaberi regions (PVDT) which involved them in its program but that was not the case for the sites in other regions. So, it is hoped that during negotiations this subject will be dealt of to know which sites will taken into charge by government and those by the request near the TFP so that their implementation will start as soon as possible.

Within the frame work of the PP, a conference was organised with the TFP intervening in the AP zone. The results of this conference are present in Appendix AP4.

10.2 Proposals for next constructions of water reservoir:

The dam's object of this study is small scale dams. They were constructed on rivers where water flows only during some days after rains and which completely dry up in dry season. Normally, the water flows will be blocked to temporarily lessen the useless water flow for the profit of agriculture, forestry, breeding and day life. In addition, the construction of small scale dams will have an impact on soil erosion control during flooding in rainy season. In case it is envisaged the keeping in place of water resources by replacing temporarily the small scale dams by sinking wells, the quantity usable for agriculture per well will be limited and will require a large number of drills, which dries up the water table. Moreover, to obtain some results in erosion control, it is necessary to carry out some activities of soil conservation and massive a forestation on the entire river bank and this could not exceed the results obtained by the small scale dams neither of the economic nor of the rapidity of results point of view.

As mentioned below; the impact of the construction of small scale dam is very significant. Therefore the construction cost is higher than school or health centre, if not in conformity with the construction criteria it is not possible to wait for an impact.

During the construction of new reservoir, it will be necessary to attack the problems of establishment of the reservoir, the problems related to the structure of the reservoirs, the problems of environmental evaluation, the land property problems, the problems related to irrigation equipment, as well to the problems of the organization of the users of the reservoirs.

These are proposals for measurements which the government of Niger must take:

10.2.1 Recommendation related to the site selection of the water reservoir

The regions of Tillabéri and Dosso are both crossed by the fossil valleys of Dallol Bosso and Dallol Maouri, tributaries of Niger river left bank, these two valleys falling in Niger at the southern end of Dosso region (see Figure 10.2(1) on the rivers of Niger).

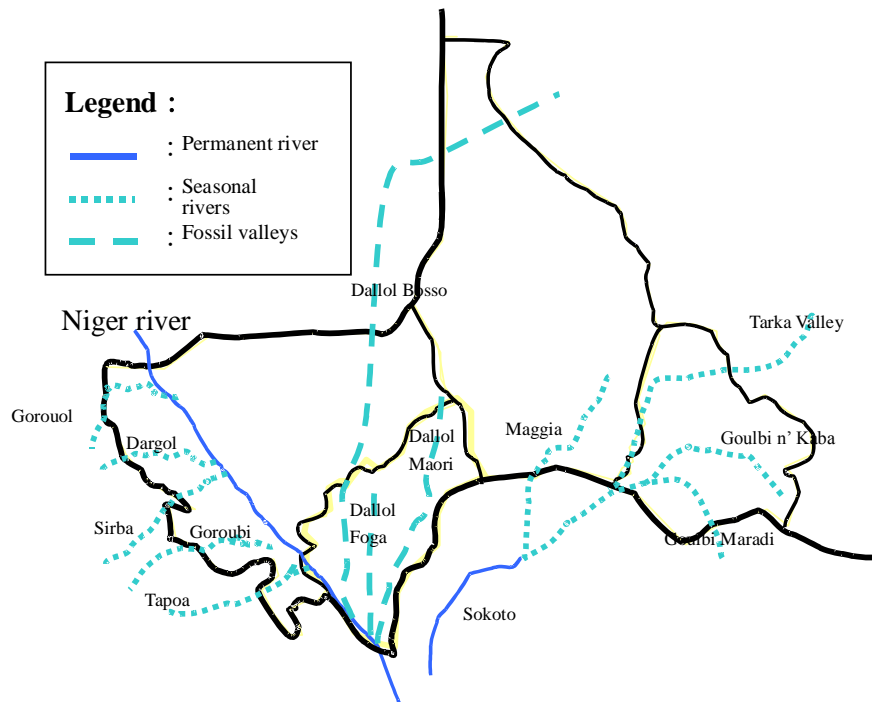


Figure 10.2(1) Rivers of Niger

Figure 10.2(2) presents a geological classification and the distribution of the water reservoirs object of the study on a geological map, and it is seen that old ergs with not directed dunes (represented in yellow on the map) extend along two banks of Dallol Bosso and Dallol Maouri. The problems of sand accumulation are related to these old ergs. These zones experience the most abundant rainfall of Niger, between 600 and 800 millimetres per annum, but the streaming which it induces quickly erodes cliffs and the plates covered with a sandy ground, and this sand is carried by the rivers in the ponds, the valleys, and water reservoirs which causes sand accumulation. This phenomenon is the main cause of the problem of sand accumulation that experience many water reservoirs of the threshold of spreading type in Tillabéri and Dosso regions.

This sandy ground is also the main cause of the problem of insufficiency of the storage period of the water reservoir of small scale dam type. The sandy grounds have a raised degree of permeability, the small scale dams built on sandy grounds do not fulfil their function of retention of water, the escapes are significant, and it is supposed that the duration of storage is reduced by as much. The second cause of this short duration of storage can be attributed to the fact that the dam is set up with a height relatively low because of constraints related to the relief, with the result that the tank is not very deep compared to its extent, generating significant losses by evaporation.

Within sight of this analysis, it is suggested to carefully choose the site of the new reservoirs, particularly by avoiding the old ergs with not directed dunes.

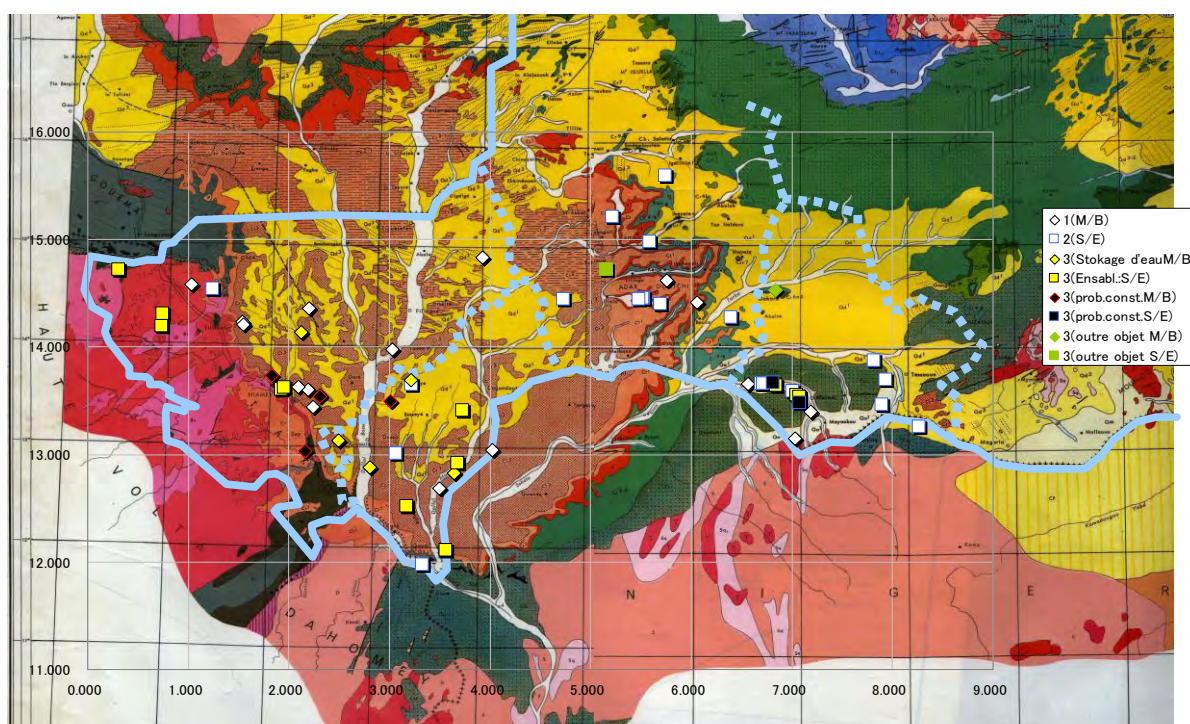


Figure 10.2(2) Geological classifications and distribution of the water reservoirs

10.2.2 Recommendations related to the structure of the water reservoirs

It was noted in June 2006 that 4 reservoirs suffered from deteriorations of their structure. The reservoir of Aboka, which had been classified like having problems of structure (3rd category) at the time of the study on the state of the reservoirs undertaken in August 2007, gave up today. It is attributed the cause to problems at the stage of the design, or the lack of mastering the construction techniques by the contractors. It is thus suggested that the agents of the official services which will be in charge of control are trained in designing of the water reservoirs and that the contractors are framed in the management of work, so that the new reservoirs are conceived and built in a suitable way.

10.2.3 Recommendations related to environmental impact assessment (EIA)

The 4 regulations related to the EIA in Niger till end of January 2009 are:

- **Law N°98-56 of 29 december, 1998**
Containing law related to the management of the environment
- **Decree N°2000-369/PRNME/FAD**
Containing attributions, Organisation and Operation of the Office of Environmental Evaluation and Impact Studies
- **Decree N°2000-397/PRNME/FAD of 20 October, 2000**
Dealing with the administrative procedure of Environmental Impact Assessment
- **Decree N°2000-398/PRNME/FAD of 20 October, 2000**
Determining the list of activities, works and documents in planning subject to the Environmental Impact Assessment

The need of the EIA for the small scale dams is mentioned in article 1 of decree No 2000-398/PRNME/FAD dated 20 October, 2000 and is related to small scale dams of more than 5 ha surface area. Following to this article, the EIA must be carried out on at least around 70% of reservoirs of the special program of the president of the republic. But no reservoirs carried out a EIA.

In the EIA, the natural, social and economic conditions of the zone are studied. Therefore concerning “10.2.1.Recommendation related to the site selection of the water reservoir” and “10.2.4. Recommendations related to Land property problems”, the countermeasures were proposed by being analysed the results of the EIA. It is consequently suggested that the EIA should be realized, before the construction of new reservoirs in conformity to the texts.

10.2.4 Recommendations related to Land property problems

The land property was not discussed at the time of the realization of the reservoirs of the first and the second phase of the Special Program of the President of the Republic. Thus the cases in which the land owners monopolize the arable lands of the reservoir's site and make the access to the new farmers authorized.

To prevent the occurrence of such land property problems, it is necessary for even making the final decision as for the site of the site of construction of the reservoir, to clearly determine the form of the land property of the arable land envisaged in the plan.

The 3 laws relating to the expropriation of lands in Niger at the end of January 2009 are as follows:

- **The constitution of 09 August, 1999 in particular its article 21**
- **The law N61-37 of 24 November, 1961 regulating the expropriation for public utility and the temporary occupation**
- **The law N2008-37 of 10 July, 2008 amending and supplementing the law N61-37 of 24 November, 1961 regulating the expropriation for public utility and the temporary occupation**

Law 61-37 prescribed that the State can own the lands which must be exploited or those whose exploitation cost exceed 20%. In accordance with this regulation, the State can acquire once the arable lands which the value increased at more than 20% after the construction of the small scale dams, then to place these lands at the disposal of a great number of farmers through a peasant organization. It is necessary to institute as quickly as possible the decree regulating the expropriation of the lands because that prevents the concrete application of the law of land expropriation.

There are thus no harmful effects in theory on the environment as mentioned in 10.2 for the reservoir build within the framework of the Special Program of the President. From the social point of view, a greater use of water because of the small scale dams increases the value of the arable lands and could generate conflicts between farmers and breeders.

The text bearing the land property of the rural villages is as follows:

- **Order N93-015 of March 1993** fixing the principles of Orientation of the Rural Code. In accordance with point 112 of the rural code, to cancel or to attenuate any risk of conflicts, it is necessary to organize meetings between the various users of water and it is recommended that it will be installed as office of adjustment one or more land commissions in the villages concerned by small scale dams. Moreover, it is recommended that the concerned local communities will establish a basic plan of arrangement of lands and a cadaster to guarantee the rights relating to the lands.

Cropping is prohibited in the pastoral zone. However, for reasons of chronic food insecurity and insufficient provisioning of the zone of food products, most of this zone is currently cropped, in an illegal way. Also, in the cases of establishment of a reservoir with agricultural or agro-pastoral vocation in pastoral zone, it is necessary to obtain a rural concession authorizing the cropping around the reservoir, and it is suggested for that, the registering in the rural file.

10.2.5 Recommendations related to the equipment of water intake

It is very rare to find sites having a suitable system of water intake. It is thus suggested that it should be integrated in each reservoir, during its construction, a system of water intake conceived by taking account of the type of reservoir and the natural conditions of the site.

10.2.6 Recommendations related to the organization of the users of the reservoirs

It was already underlined above that there are all kinds of factors which contribute to the effective absence of valorization of the reservoirs, but, independent of the presence or not of problems involved in the reservoir itself, the main cause of a bad valorization is the fact that the users are not sufficiently organized. Consequently, it is suggested that, during the construction of new reservoirs, the recipients are beforehand well defined, that they are organized, and that they are trained in the maintenance of the equipment during construction.

With regard to the installation of cooperatives, it is necessary to define the bases of selection of a recipient for the construction of new reservoirs. The criteria of selection to fulfil to benefit of a new reservoir to build are indicated in the table below:

Table10.2 (1): Criteria of selection of a recipient for the construction of new reservoirs

Before the construction of the reservoir	After the construction of the reservoir
To be user of the site for the agricultural, pastorals activities, of fishing or user of the water retained for the domestic needs on the basis documents in proof (testimony of the population exploiting the site)	To want to be user of the site for the agricultural, pastorals activities, of fishing or user of the water retained for the domestic needs (For the farmers the testimony of the landowners of the site is necessary)
To be member of the cooperative	To be member of the cooperative
NB: If there are landowners who refuse to place part of their land at the disposal of other farmers, those will be the subject of expropriation.	

10.2.7 Recommendations related to the responsibility of dealing with the maintenance costs of the vehicles and the travelling expenses of the government officials

It would be desirable to envisage the inscription each year on the national budget of funds on the section for treasure intended to face the problems of responsibility of dealing with the cost of the following activities:

- Maintenance and repairs of the vehicles of the State used by the Regional Directions of the Agricultural Development within the framework of the supervision and the monitoring of the basic extension agents (BEA)
- Travelling expenses of the government officials intervening in the implementation of the action plan (national, regional, departmental senior managers and basic extension agents)

10.3 Efforts for literacy

It is necessary to install organizations for the sustainable management of water reservoirs so the maximum benefit will be yielded. For that to be realized, members of the executive members of the cooperative must have at least a certain level in terms of reading/writing and calculation. That is why the pilot project decided to train some literacy teachers who will in turn train the members of the cooperative and take their allowances in charge. After check out of this system, the literacy courses do not hold because the teacher's allowances were not taken into account by the cooperatives.

Therefore, it has been proposed that the assistant secretary general and treasurer must be selected among the literates. However, for the management of the cooperative to be efficient, it must comprise a significant number of literate members. That is why it was recommended to Niger government to create a large number of literacy centers with State budget or through the NGOs

Appendix AP1: List of equipments and materials

No	Designation	A1.1	A2.4	A2.5	B1.1	B1.2	B2	B4	B5	B6	B7	Unit cost
1	Sprayers				1							200,000
2	Watering cans (unit)			5	10							1,500
3	Auchenauglanis occidentalis (Bouraw) (unit)								1,200			200
4	Bache							1				20,000
5	digging auger (unit)		10	10								1,500
6	hoe									15		1,000
7	hoe (unit)			5						5		1,000
8	wood of arabic gum					1						3,000
9	wood for transport (unit)					4						1,000
10	motor pump spark plug (unit)					2						1,000
11	euphorbia transplants (set)		1									200,000
12	Wheelbarrow (unit)		5	5								25,000
13	Fuel for motorpump							1,000				700
14	Tyre tubes (unit)					1						7,500
15	carts (unit)			1								150,000
16	Ciment (unit)		1			2						7,000
17	100 m rope (unit)		1	1								9,000
18	simple rope (meter)					30						1,000
19	Matchet (unit)		20	20								2,000
20	Cylinder (unit)									1		15,000
21	hand hoe (unit)			20		1				6		2,000
22	20 m measurement ruler(unit)		1	1								30,000
23	Dursban pesticide (liter)									3		15,000
24	Fertilizers (bag)						50	5		2	8	20,000
25	8 mm of 12 mm wire for concrete (unit)		10									5,000
26	Fongicids (sticks)										5	350
27	Drill							2				70,000
28	ALTONA oven								1			50,000
29	digging fork (unit)					4						1,000
30	large rope (unit)					1						4,500
31	Grafting knife (unit)									20		10,000
32	Graft of grafted citrus fruit tree									150		75
33	Graft of grafted mango tree									200		100
34	Graft of Sahel apple tree									100		125
35	matchet (unit)		5	5								2,000
36	Heterobranchnus bidorsalis (Rambochi) (unit)								150			500
37	useless oil (liter)					4						1,000
38	Chisel (unit)			5								5,000
39	Motorcycle DT 125	1										1,850,000
40	motorpump and equipments (unit)					1		2				400,000
41	mangot cores (50 kgs bags)									1		15,000
42	Oreochromus niloticus (Gargaza of 1 to 2 Kg) (unit)								12,000			10
43	Oxygene (5m3bottles) (unit)								1			55,000
44	set of bootes (unit)			20				6				20,000
45	set of gloves (unit)							6				10,000
46	shovel (unit)		5	5								5,000
47	hand fork (unit)		20	20		1						7,000
48	arabic gum tree seedlings									200		125
49	ordinary jujuba tree seedlings									75		300
50	ordinary mango tree seedlings									150		350
51	seedlings of Moringa									100		200
52	sahel apple tree seedlings									300		600
53	volka citrus fruit tree grafting material									150		300
54	band of grafting pots (unit)									8		15,000
55	pedal pump (unit)					1						80,000
56	plastic bags (unit)									1,000		50
57	arboriculture plastic pots			3,000						350		50
58	Crop protection products (liter)							10			3	7,000
59	ladle (unit)					2						6,000
60	Rakes (unit)		6	6								7,000
61	band of latice (25 m) (unit)			4								47,000
62	plastic bags (unit)								70			500
63	Secateur (unit)			5						12		14,000
64	Seeds of citrus fruit trees (kg)									0.05		140,000
65	Seeds of forest trees (bag)			1								10,000
66	Guava seeds (kg)									0.05		60,000
67	Seeds of millet/sorghum (kg)										200	1,000
68	Seeds of cowpea (kg)										100	1,500
69	Seeds of papaya (kg)									0.1		90,000
70	Seeds of rice (kg)							5				1,000
71	Sieve (unit)			2								10,000
72	empty drums (unit)					1		1				5,000
73	Unit of fishing materials (fishing equipments and materials, canoe) (unit)								1			350,000

Appendix AP2 : Project design Matrix (PDM)

Name of the project: Study on Sahel Oasis Development in the Republic of Niger (Action plan)

Period of the study including the pilot projects:6 years as from January 2010

Updated :August 16, 2009

Project targets zone: Sites in Tillabéri, Dosso, Tahoua, Maradi and Niamey areas, in Republic of Niger

Target groups: Populations of the zone of study, government officials on national and decentralized levels and agents of the communities

Outline of the project		Indicators	Mode of acquisition of the data on the indicators	External conditions
General objective		Reduction of poverty and struggle against desertification around reservoirs	Report of the environmental Assessment	
To contribute to the reduction of poverty and struggle against desertification through the rural development around reservoirs				
Objectives of the project		Possibility of increase of 50% or more in the income compared to the starting situation of a site after the implementation of the project.	Verbal lawsuit of the steering committee, Report/ratio of missions of supervision of the DSP / MAD, Results of the investigations	
To implement and to deploy actions of agricultural development carried out by the populations, cantered on the valorisation of the water reservoirs by farmer to farmer transmission, with the support of the government services				
Awaited results		1) At least 80% of cooperatives, continue to carry out their plan of valorisation 2) All the extension agents targeted practise the facilitation 3) All the counterparts understand PCM method	Reports of the monthly monitoring meetings Results of the investigations Results of the investigations	
1) The capacities of the organizations of populations as regards execution of the activities are reinforced.				
2) the capacities of the extension agents as regards facilitation near the populations are reinforced.				
3) the capacities of the counterparts as regards management of the projects are reinforced.				
Activities		Intrants		
		PTF side	Niger side	Prerequisites The populations of the zone concerned are not opposed to the project. CDA affected on the level of each reservoir site
A	Reinforcement of the capacities of farmers on reservoirs in self development	[Experts] Rural Development, Irrigation, Organization, Agriculture, administration [Supply of equipment] Offices, vehicles Material and materials [funds required for activity]	[Steering committee] Take part in the meetings, the representatives of the Ministry of Agricultural Development (DSP, DCA/PRO, GDRE, Permanent secretariat rural code), ME/SAD, Ministry of breeding and animal industries, MTA/CD, Ministry of Water resources and Ministry of the Economy and finances.	
A1	Reinforcement of the capacities of the extension agents		[Consultative Committee] Take part in the meetings, the Assistant Secretary-general of Governor office of each area concerned, the representatives of the various regional directions and government services concerned, the projects	
A1.1	Provision of means of monitoring to the extension agents			
A1.2	Reinforcement of the capacities of the extension agents as regards animation for the farmers on the reservoirs			
A1.3	Installation of a system of sharing and capitalization of information			
A2	Reinforcement of the capacities of the farmers as regards planning, execution, monitoring and evaluation of the actions of valorisation of the reservoirs			
A2.1	Installation of the cooperatives of reservoir users			
A2.2	Training on the establishment, execution, monitoring and evaluation of the Reservoirs Valorisation Plans (RVP)			
A2.3	Training on the maintenance of reservoirs			
A2.4	Installation of the BLPC for the natural resources management			
A2.5	Training on the struggling against sand accumulation			
B	Improvement of the incomes and living conditions of farmers on reservoirs		[Execution] CDA, DDDA, DRDA, RSCA/PRO, of each area concerned	
B1	Intensification and diversification of garden crops			
B1.1	Training on the techniques of gardening			
B1.2	Reinforcement of the system of irrigation			
B2	Installation of the inputs shop			
B3	Support to the marketing of the agricultural products			
B4	Introduction of rice growing			
B5	Fish farming on water reservoirs			
B6	Introduction of fruit-bearing arboriculture			
B7	Introduction of new varieties seeds of rainfed crops			
B8	Support to the transformation and conservation of the agricultural products			
B9	Support to the micro finance of tontine type			
B10	Training on animal feeding and health			
B11	Training on the improvement of knowledge as regards health and hygiene (diseases related to water)			
B12	Introduction of the improved cooking stoves			

Appendix AP3: Detailed calculation of the total cost of the projects

Component	Activity	content	Quntity	Unit price (francs CFA)	Unit	Total (francs CFA)
A. Reinforcement of capacities of reservoirs users in self development	Equipping of basic extension agents with motorcycles	formation of the motorbike riding and the maintenance	1	60,000	36 sites	2,160,000
		Purchase motorbike for CDA	1	1,850,000	36 sites	66,600,000
		Fuel fee for the follow-up by CDA for 34 months	1	952,000	36 sites	34,272,000
		Maintenance fee of the CDA's motorbike for 34 months	1	680,000	36 sites	24,480,000
		Fuel fee for the follow-up by DDDA for 34 months	1	595,000	36 sites	21,420,000
		Lubricate fee for the follow-up by DDDA for 34 months	1	30,000	36 sites	1,080,000
		sub-total				150,012,000
	Reinforcement of capacities of basic extension agents in organizing reservoirs users	To make the extension agents aware of the action plan	1	752,500	36 sites	27,090,000
		Detailed diagnosis of sites by the extension agents	1	70,000	36 sites	2,520,000
		The cost about training participation is contained in each project.				
		sub-total				29,610,000
	Installation of a system of distribution and capitalization of information	Monitoring meeting (Region level , 1 day every 2 months, 16times)	1	139,758,000	1 unit	139,758,000
		Consultative committees (Region level , 1 day par year, 3times)	1	72,675,000	1 unit	72,675,000
		sub-total				212,433,000
	total					392,055,000

The Budget of "B.Improvement of incomes and living condition of reservoirs users" is indicated page following

total

1,640,937,250

	content	Quntity	Unit price (francs CFA)	Unit	Total (francs CFA)
Other actions to be implemented	Environmental assessment	1	2,941,000	36 sites	105,876,000
	Participation in the agro-sylvo-pastoral fairs	5	1,127,500	1 project	5,637,500
	Participation to meetings of the regional consultative committee	3	413,500	5 regions	6,202,500
	Missions of supervision of the Directorate of the Studies and Planning off the Ministry for the Agricultural Development	3	937,500	5 regions	14,062,500
	Steering committee	6	737,000	1 project	4,422,000
	Establishment and translation of guides and supports	1	18,434,250	1 unit	18,434,250
total					154,634,750

content			Quntity	Unit price (francs CFA)	Unit	Total (francs CFA)
The study team's management cost (logistics, personnel, office,...)	vehicles cost (3vehicles for the project)	Purchase 4x4 3vehicles	3	27,000,000	1 time	81,000,000
		Driver's salary (3pers. 6 years)	3	2,746,667	6 years	49,440,006
		Fuel fee (3vehicles, 6years)	3	3,710,480	6 years	66,788,640
		Maintenance (3vehicles, 6 yerars)	3	1,943,502	6 years	34,983,036
		sub-total				232,211,682
	Fees for the personnel	Local staff (4pers.6years)	4	7,200,000	6 years	172,800,000
		sub-total				172,800,000
	Office hiring cost	Office in Niamey (3 years)	1	14,400,000	3 years	43,200,000
		Office in Maradi (3 years)	1	3,600,000	3 years	10,800,000
		sub-total				54,000,000
	total					459,011,682

Grand total (francs CFA)

2,646,638,682

Appendix AP3: Detailed calculation of the total cost of the projects

		A. Reinforcement of capacities of reservoirs users on self development							B. Improvement of incomes and living conditions of reservoirs users											
		A2.Reinforcement of farmer' s capacities in planning, execution, monitoring and evaluation of actions for the valorization of the reservoir					B1. Intensification and diversification of garden crops		B2 Installation of inputs shops	B3 Support to the management of sales form agricultural products	B4 Introduction of rice cultivation	B5. Fish farming in the reservoir	B6. Introduction of fruit arboriculture	B7. Introduction of new varieties seeds for rainfed cultivation	B8. Support to processing and conservation of agricultural products	B9. Support of Micro finance of tontine type	B10. Training on animal health and feeding (for reservoirs meant for pastoral purpose)	B11. Training on the improvement of knowledge in health and hygiene (diseases related to water)	B12. Introduction of improved cooking stoves	
		A2.1 Installation of reservoirs users cooperatives	A2.2 Training on the establishment, execution, monitoring and evaluation of reservoirs valorisation plans (RVP)	A2.3 Training on the maintenance of reservoirs	A2.4 Installation of BLPC for natural resources management	A2.5 Training on struggling against sand accumulation	B1.1 Training on dry season cultivation techniques	B1.2 Reinforcement of irrigation system												
Category 1	1 Kongou Gorou (Ni, MB)	Isite	Isite	Isite	3village	Isite	Isite	Isite	Isite	Isite		Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	
	2 Sorey (Ni, MB)	Isite	Isite	Isite	5village	Isite	Isite	Isite	Isite	Isite			Isite	Isite	Isite	Isite	Isite	Isite	Isite	
	3 Tondibia Gorou (Ni, MB)	Isite	Isite	Isite	4village	Isite	Isite	Isite	Isite	Isite			Isite	Isite	Isite	Isite	Isite	Isite	Isite	
	4 Bonkor (Ti, MB)	Isite	Isite	Isite	2village	Isite	Isite	Isite	Isite	Isite		Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	
	5 Fanakoira (Ti, MB)	Isite	Isite	Isite	3village	Isite	Isite	Isite	Isite	Isite		Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	
	6 Gaigorou (Ti, MB)	Isite	Isite	Isite	1village	Isite	Isite	Isite	Isite	Isite		Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	
	7 Kandoum (Ti, MB)	Isite	Isite	Isite	3village	Isite	Isite	Isite	Isite	Isite		Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	
	8 Mari (Ti, MB)	Isite	Isite	Isite	6village	Isite	Isite	Isite	Isite	Isite		Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	
	9 Sanam (Ti, MB)	Isite	Isite	Isite	1village	Isite	Isite	Isite	Isite	Isite			Isite	Isite	Isite	Isite	Isite	Isite	Isite	
	10 Gombewa (Do, MB)	Isite	Isite	Isite	8village	Isite	Isite	Isite	Isite	Isite			Isite	Isite	Isite	Isite	Isite	Isite	Isite	
	11 Koré Bechemi (Do, MB)	Isite	Isite	Isite	5village	Isite	Isite	Isite	Isite	Isite			Isite	Isite	Isite	Isite	Isite	Isite	Isite	
	12 Rouda Goumandey (Do, MB)	Isite	Isite	Isite	2village	Isite	Isite	Isite	Isite	Isite			Isite	Isite	Isite	Isite	Isite	Isite	Isite	
	13 Guidan Bado (Ta, MB)	(Isite)	(Isite)	(Isite)	(2village)	(Isite)	(Isite)	(Isite)	(Isite)	(Isite)		(Isite)	(Isite)	(Isite)	(Isite)	(Isite)	(Isite)	(Isite)	(Isite)	
	14 Tarwada (Ta, MB)	Isite	Isite	Isite	5village	Isite	Isite	Isite	Isite	Isite			Isite	Isite	Isite	Isite	Isite	Isite	Isite	
	15 Dan Lssa (Danja) (Ma, MB)	Isite	Isite	Isite	5village	Isite	Isite	Isite	Isite	Isite		Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	
	16 Rafin Wada (Ma, MB)	Isite	Isite	Isite	8village	Isite	Isite	Isite	Isite	Isite		Isite	Isite	Isite	Isite	Isite	Isite	Isite	Isite	
	17 Tchidafawa (Ma, MB)	Isite	Isite	Isite	8village	Isite	Isite	Isite	Isite	Isite			Isite	Isite	Isite	Isite	Isite	Isite	Isite	
Category 2	1 Molia (Ti, WEIRS)	Isite	Isite	Isite	4village	Isite	Isite	Isite	Isite	Isite	Isite		Isite	Isite	Isite	Isite	Isite	Isite	Isite	
	2 Bougiri (Do, WEIRS)	Isite	Isite	Isite	3village	Isite	Isite	Isite	Isite	Isite	Isite		Isite	Isite	Isite	Isite	Isite	Isite	Isite	
	3 Kogar beye (Do, WEIRS)	Isite	Isite	Isite	4village	Isite	Isite	Isite	Isite	Isite	Isite		Isite	Isite	Isite	Isite	Isite	Isite	Isite	
	4 Tanda (Do, WEIRS)	Isite	Isite	Isite	1village	Isite	Isite	Isite	Isite	Isite	Isite		Isite	Isite	Isite	Isite	Isite	Isite	Isite	
	5 Akoukou (Ta, WEIRS)	Isite	Isite	Isite	7village	Isite	Isite	Isite	Isite	Isite	Isite		Isite	Isite	Isite	Isite	Isite	Isite	Isite	
	6 Bourdi 1 (Ta, WEIRS)	(Isite)	(Isite)	(Isite)	(3village)	(Isite)	(Isite)	(Isite)	(Isite)	(Isite)	(Isite)			(Isite)	(Isite)	(Isite)	(Isite)	(Isite)	(Isite)	
	7 Bourdi 2 (Ta, WEIRS)	Isite	Isite	Isite	3village	Isite	Isite	Isite	Isite	Isite	Isite		Isite	Isite	Isite	Isite	Isite	Isite	Isite	
	8 Chanyassou (Ta, WEIRS)	Isite	Isite	Isite	5village	Isite	Isite	Isite	Isite	Isite	Isite		Isite	Isite	Isite	Isite	Isite	Isite	Isite	
	9 Edir (Ta, WEIRS)	Isite	Isite	Isite	10village	Isite	Isite	Isite	Isite	Isite	Isite		Isite	Isite	Isite	Isite	Isite	Isite	Isite	
	10 Edouk (Ta, WEIRS)	(Isite)	(Isite)	(Isite)	(14village)	(Isite)	(Isite)	(Isite)	(Isite)	(Isite)	(Isite)			(Isite)	(Isite)	(Isite)	(Isite)	(Isite)	(Isite)	
	11 Gadiyaw (Ta, WEIRS)	Isite	Isite	Isite	9village	Isite	Isite	Isite	Isite	Isite	Isite		Isite	Isite	Isite	Isite	Isite	Isite	Isite	
	12 Grougoutourou (Ta, WEIRS)	Isite	Isite	Isite	2village	Isite	Isite	Isite	Isite	Isite	Isite		Isite	Isite	Isite	Isite	Isite	Isite	Isite	
	13 Zongon Roukouzoum (Ta, WEIRS)	Isite	Isite	Isite	3village	Isite	Isite	Isite	Isite	Isite	Isite		Isite	Isite	Isite	Isite	Isite	Isite	Isite	
	14 Bakassombouba (Ma, WEIRS)	Isite	Isite	Isite	5village	Isite	Isite	Isite	Isite	Isite	Isite		Isite	Isite	Isite	Isite	Isite	Isite	Isite	
	15 Béri-Béri (Ma, WEIRS)	Isite	Isite	Isite	7village	Isite	Isite	Isite	Isite	Isite	Isite		Isite	Isite	Isite	Isite	Isite	Isite	Isite	
	16 Iyataoua (Ma, WEIRS)	Isite	Isite	Isite	11village	Isite	Isite	Isite	Isite	Isite	Isite		Isite	Isite	Isite	Isite	Isite	Isite	Isite	
	17 Kananbakache (Ma, WEIRS)	Isite	Isite	Isite	1village	Isite	Isite	Isite	Isite	Isite	Isite		Isite	Isite	Isite	Isite	Isite	Isite	Isite	
	18 Koumchi (Ma, WEIRS)	Isite	Isite	Isite	7village	Isite	Isite	Isite	Isite	Isite	Isite		Isite	Isite	Isite	Isite	Isite	Isite	Isite	
	19 Magaagi Rogo (Ma, WEIRS)	Isite	Isite	Isite	3village	Isite	Isite	Isite	Isite	Isite	Isite		Isite	Isite	Isite	Isite	Isite	Isite	Isite	
	20 Mi i (Ma, WEIRS)	Isite	Isite	Isite	1village	Isite	Isite	Isite	Isite	Isite	Isite		Isite	Isite	Isite	Isite	Isite	Isite	Isite	
	21 Roura (Ma, WEIRS)	Isite	Isite	Isite	3village	Isite	Isite	Isite	Isite	Isite	Isite		Isite	Isite	Isite	Isite	Isite	Isite	Isite	
Category 3 (Objective of construction other than agricultural)	1 Jaja (Ta, WEIRS)	(Isite)	(Isite)	(Isite)	(1village)	(Isite)			(Isite)					(Isite)		(Isite)	(Isite)	(Isite)	(Isite)	
	2 Bokologi (Ma, MB)	Isite	Isite	Isite	1village	Isite			Isite					Isite		Isite	Isite	Isite	Isite	
AP		36site	36site	36site	159village	36site	35site	35site	36site	35site	19site	8site	35site	36site	35site	36site	36site	36site	36site	
PP		4site	4site	4site	20village	4site	3site	3site	4site	3site	2site	Isite	3site	4site	3site	4site	4site	4site	4site	
unit of the action (action, region, site, village, time)		36site	36site	36site	40time/4village	36site	35site	35site	36site	35site	19site	8site	35site	36site	35site	36site	36site	36site	36site	
unit price of the action (unit : francs CFA)		1, 270, 500	519, 000	1, 403, 000	2, 650, 500	2, 231, 500	1, 003, 000	7, 189, 500	5, 970, 000	422, 500	17, 135, 000	11, 475, 000	6, 480, 250	630, 250	1, 712, 500	1, 085, 000	442, 500	467, 500	683, 000	
cost of the actions (unit : francs CFA)		45, 738, 000	18, 684, 000	50, 508, 000	106, 020, 000	80, 334, 000	35, 105, 000	251, 632, 500	214, 920, 000	14, 787, 500	325, 565, 000	91, 800, 000	226, 808, 750	22, 689, 000	59, 937, 500	39, 060, 000	15, 930, 000	16, 830, 000	24, 588, 000	
Total cost of the actions (unit : francs CFA)		1, 640, 937, 250																		

Appendix AP4: Result of conference with the TFP intervening in the AP zone

Collaboration with the projects

With the aim of seeking the possibilities of collaboration for the execution of the action plan with the various projects having the same objectives as the Study on Sahel Oases Development and also collecting their opinions on the activities carried out and the strategy used, it was organized in Tahoua a working session May the 20, and 21 2009. This working session comprised a presentation of the study, a visit of the achievements followed by a discussion with the farmers of the site of Bourdi then discussions in room. The results of the discussions on the possibilities of collaboration by project present at this meeting are summarized in the following table:

Possibilities of collaboration within the framework of the Action plan (AP)

Projects	Possibilities of collaboration within the framework of the Action plan
Project of valorisation of water in Dosso and Tillabéri regions (PVDT) of the African Development Bank (ADB)	The project intervenes already on the level of 4 sites of categories 1 and 2 (Bonkor, Gaïgorou, Mari and Molia). The PVDT has practically the same approach of intervention like the AP. It can be considered a synergy and of complementarity of action between the two projects. However, the principles of collaboration must be defined and formalized between the two projects.
Project of Small Hydraulics for the Food Safety (PSHFS) of FAO	There are possibilities of collaboration in Tahoua region which constitutes one of the zones of intervention of the PSHFS. The project has a certain number of experiments in particular within the framework of hydro agricultural installations which can be shared with AP. The results obtained by SSOD will certainly be used within the framework of the implementation of the PSHFS. The documents of certain studies undertaken by the PSHFS can be provided to SSOD to take into account in the action plan. The PSHFS will benefit much from the experiments of SSOD in particular in the case of the "peasants- demonstration-fields". However, it is necessary to re-examine the articulations of the relations between the project, the supervision and the communities. It is necessary to install a framework of dialogue but preferably bilateral through protocols.
Fight Against Poverty (LUCOP) of the German cooperation	LUCOP has a broad experiment within the framework of the support/advise. The program intervenes only in the Departments of Tahoua and Abalak at the request of the communities. Collaboration will be especially centred in the field of the support/advise to the peasants. The process of sustainability of the assets is in the course of study. LUCOP intervenes in the villages of Akoukou and Gadiyaw. There will be the possibility of taking account of the sites of AP if however that is required by the communities of the zone of intervention of LUCOP.
Project of Support to Food Safety (PSFS) of the Arab Bank for Economic Development in Africa (ABEDA)	The project will close at the end of this year 2009. It is envisaged however one second phase for which the starting period is not yet given. The PSFS even entrusted part of its sites to the PVD. The studies carried out by the PSFS can be exploited within the framework of the AP. Within the framework of the second phase of the project, the relations of collaboration could be considered in a clear and precise way.

Appendix AP5: Documents list of the trainings

Components	Activities		year	Document number	Production documents	Language				
						F	H	T	D	
A. Reinforcement of capacities of reservoirs users in self development	A.1.Reinforcement of capacities of basic extension agents	A1.1 Equipping of basic extension agents			rapport final	x				
		A1.2 Reinforcement of capacities of basic extension agents in organization of reservoir users			rapport final	x				
		A1.3 Installation of a system of distribution and capitalization of information			rapport final	x				
	A2.Reinforcement of farmer's capacities in planning, execution, monitoring and evaluation of reservoirs valorisation plans (RVP)	A2.1 Installation of cooperatives of the reservoirs users	2007	1	Guide de formation des agents vulgarisateurs pour la mise en place des comites de utilisateurs des ouvrages	x				
			2007	2	Guide de formation des membre des bureaux des coopératives des utilisateurs des ouvrages	x				
			2007	3	Supports de formation des membres des comites de gestion versions française, haoussa et tamasheq	x	x	x		
		A2.2 Training on the establishment, execution, follow-up and evaluation of reservoirs valorisation plans (RVP)	2007	4	Guide de formation sur l'élaboration, l'exécution, le suivi et l'évaluation du Plan de Valorisation des Ouvrage(PVO)	x				
			2007	5	Supports de la formation sur l'élaboration, l'exécution, le suivi et l'évaluation du Plan de Valorisation des Ouvrages(PVO) versions française, haoussa et tamasheq	x	x	x		
		A2.3 Training on the maintenance of reservoirs	2007	6	Guide de formation des utilisateurs des mini-barrages et seuils d'épandage sur la maintenance et l'entretien des ouvrages	x				
			2007	7	Supports de formation des utilisateurs des mini-barrages et seuils d'épandage sur la maintenance et l'entretien des ouvrages versions française, haoussa et tamasheq	x	x	x		
			2008	8	Guide d'animation d'un atelier d'échange interne sur site	x				
		A2.4 Installation of BLPC for the management of natural resources	2007	37	Guide de formation sur la prévention des dégâts causés par le bétail	x				
			2007	38	Supports de formation sur le processus de prévention des dégâts causés par le bétail versions française, haoussa et tamasheq	x	x	x		
			2007	35	Guide pour la formation sur la protection et conservation des terres agricoles	x				
		A2.5 Training on struggling against sand accumulation	2007	36	Supports pour la formation des producteur ruraux sur la protection et conservation des terres agricoles versions française, haoussa et tamasheq	x	x	x		
B. Improvement of incomes and living conditions of reservoirs users	B1. Intensification and diversification of dry season cultivation	B1.1 Training on gardening techniques	2008	13	Guide de formation sur les techniques des cultures maraîchage	x				
			2008	14	Support de formation sur les techniques des cultures marîchage versions française, haoussa et tamasheq	x	x	x		
			2007	15	Guide de formation sur l'eco verger	x				
		B1.2 Reinforcement of irrigation system	2007	16	Supports de formation sur l'eco verger versions française, haoussa et tamasheq	x	x	x		
			2008	33	Guide de formation sur les systemes d'exhaure(pompe, motopompe, traction animale) et les réseaux d'irrigation	x				
			2008	34	Support de formation sur les systemes d'exhaure(pompe, motopompe, traction animale) versions française, haoussa et tamasheq	x	x	x		
	B2 Installation of inputs shops		2007	23	Guide de formation des producteurs sur l'auto approvisionnement en intrants et l'amelioration de la commercialisation des produits agricole	x				
			2007	24	Supports de formation des producteurs, a l'organisation de approvisionnement en intrants agricoles et l'amelioration de la commercialisation des produits agricole versions française, haoussa et tamasheq	x	x	x		
	B3 Support to the management of sales of agricultural products		2007	23	Guide de formation des producteurs sur l'auto approvisionnement en intrants et l'amelioration de la commercialisation des produits agricole	x				
			2007	24	Supports de formation des producteurs, a l'organisation de approvisionnement en intrants agricoles et l'amelioration de la commercialisation des produits agricole versions française, haoussa et tamasheq	x	x	x		
			2006	39	Catalogue des AGR (Etude de l'etat reel des activités génératrices de revenu) saison hivernale	x	x	x		
			2007	40	Guide de formation sur les Activités Génératrices de Revenus (AGR)	x				
			2007	41	Supports de formation sur les Activités Génératrices de Revenus (AGR) versions française, haoussa et tamasheq	x	x	x		
			2007	42	Calalogue des AGR (Etude complémentaire de l'etat reel des activités génératrices de revenu)saison sèche	x	x	x		
			2007	43	Manuel des AGR (Etude complémentaire de l'etat reel des activités génératrices de revenu)saison sèche	x	x	x		
	B4 Introduction of rice cultivation		2007	25	Guide de formation sur la conduite de la riziculture	x				
			2007	26	Supports de formation sur la conduite de la riziculture versions française, haoussa et tamasheq	x	x	x		
			2007	27	Guide de formation sur l'empoissonnement d'une retenue d'eau	x				
	B5. Introduction of Fish farming		2007	28	Supports de formation sur l'empoissonnement d'une retenue d'eau versions française, haoussa et tamasheq	x	x	x		
			2008	17	Guide de formation sur l'arboriculture fruitière	x				
	B6. Introduction of fruit growing		2008	18	Support de formation sur l'arboriculture fruitière versions française, haoussa et tamasheq	x	x	x		
			2007	19	Guide de formation pour l'introduction de nouvelles varietes de mil	x				
	B7. Introduction of improved seed verities for rainfed cultivation		2007	20	Supports de formation pour l'introduction de nouvelles varietes de mil versions française, haoussa et tamasheq	x	x	x		
			2007	21	Guide de formation pour l'introduction de nouvelles varietes de sorgho	x				
			2007	22	Supports de formation pour l'introduction de nouvelles varietes de sorgho versions française, haoussa et tamasheq	x	x	x		
					Guide de formation pour l'introduction de nouvelles varietes de niebé					
					Supports de formation pour l'introduction de nouvelles varietes de niebé versions française, haoussa et tamasheq					
	B8. Support to the processing and conservation of the agricultural products		2006	39	Catalogue des AGR (Etude de l'etat reel des activités génératrices de revenu) saison hivernale	x	x	x		
			2007	40	Guide de formation sur les Activités Génératrices de Revenus (AGR)	x				
			2007	41	Supports de formation sur les Activités Génératrices de Revenus (AGR) versions française, haoussa et tamasheq	x	x	x		
			2007	42	Calalogue des AGR (Etude complémentaire de l'etat reel des activités génératrices de revenu)saison sèche	x	x	x		
			2007	43	Manuel des AGR (Etude complémentaire de l'etat reel des activités génératrices de revenu)saison sèche	x	x	x		
			2008	44	Guide de formation sur les techniques de transformation et conservation des produits agricoles	x				
			2008	45	Supports de formation sur les techniques de transformation et conservation des produits agricoles versions française, haoussa et tamasheq	x	x	x		
			2008	29	Guide de formation sur la conservation du poisson et le marketing	x				
	B9. Support of Micro finance of tontine type		2008	30	Supports de formation sur la conservation du poisson et le marketing versions française, haoussa et tamasheq	x	x	x		
			2006	56	Guide de formation en micro finance type tontine	x				
	B10. Training on animal health and feeding		2006	57	Supports de la formation en micro finance type tontine versions française, haoussa et tamasheq	x	x	x		
					Guide de formation sur l'alimentation et la santé animale					
	B11. Training on the improvement of knowledge in health and hygiene (diseases related to water)				Supports de formation sur l'alimentation et la santé animale versions française, haoussa et tamasheq					
			2007	52	Guide de formation pour l'amélioration des connaissances en matière de santé et hygiène	x				
	B12. Introduction of improved cooking stove		2007	53	Supports de formation sur l'amélioration des connaissances en matière de santé et hygiène versions française, haoussa et tamasheq	x	x	x		
			2007	54	Guide de formation sur les foyers améliorés en banco	x				
			2007	55	Supports de formation sur les foyers améliorés en banco versions française, haoussa et tamasheq	x	x	x		

language : F(French) , H(Haoussa) , T(Tamasheq) , D(Djerma)

already establishment

SSOD did not made document though it is necessity in the AP